

[On ITW Letterhead]
[Opinion of Janet O. Love, Esq.]

February 25, 2014

Illinois Tool Works Inc.
3600 West Lake Avenue
Glenview, Illinois 60026

Re: Illinois Tool Works Inc.
\$650,000,000 0.900% Notes due 2017
\$650,000,000 1.950% Notes due 2019
\$700,000,000 3.500% Notes due 2024

Ladies and Gentlemen:

I am Deputy General Counsel and Assistant Secretary of Illinois Tool Works Inc., a Delaware corporation (the “Company”), and I am delivering this opinion in connection with the issuance and sale by the Company of (i) \$650,000,000 aggregate principal amount of the Company’s 0.900% Notes due 2017 (the “2017 Notes”), (ii) \$650,000,000 aggregate principal amount of the Company’s 1.950% Notes due 2019 (the “2019 Notes”) and (iii) \$700,000,000 aggregate principal amount of the Company’s 3.500% Notes due 2024 (the “2024 Notes” and together with the 2017 Notes and the 2019 Notes, the “Notes”). The Notes are being issued pursuant to an Indenture dated as of November 1, 1986, as supplemented by a First Supplemental Indenture dated as of May 1, 1990 (together, the “Indenture”), between the Company and The Bank of New York Mellon Trust Company, N.A., as successor trustee (the “Trustee”). The Notes are being offered and sold pursuant to the Registration Statement on Form S-3 (File No. 333-183449) (the “Registration Statement”) filed by the Company with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the “Securities Act”), on August 21, 2012 and the related prospectus supplement dated as of February 18, 2014 (the “Prospectus Supplement”). In connection with the issuance and sale of the Notes, the Company entered into an Underwriting Agreement dated February 18, 2014 (the “Underwriting Agreement”) among the Company and the Underwriters named therein.

For purposes of this opinion, I have examined originals or copies, certified or otherwise identified to my satisfaction, of the Indenture, the Officers’ Certificate establishing the terms of the Notes (including the form of Note attached thereto), the Registration Statement, the Prospectus Supplement, the Underwriting Agreement and such other documents, corporate records, certificates of public officials and instruments, and have considered such matters of law, as I have deemed appropriate as the basis for the opinions set forth below. I have assumed the authority of the Trustee to enter into the Indenture and to authenticate the Notes, the genuineness of all signatures, the authenticity of all documents submitted to me as originals, and the conformity to authentic originals of all documents submitted to me as copies.

Based on the foregoing, and subject to the qualifications, limitations and assumptions stated herein, in my opinion, the Notes constitute valid and binding obligations of the Company, enforceable in accordance with their terms, except as (a) the enforceability thereof may be limited by bankruptcy, insolvency, reorganization, fraudulent transfer, moratorium or similar laws now or hereinafter in effect relating to or affecting the enforcement of creditors’ rights generally and (b) the availability of equitable

remedies may be limited by equitable principles of general applicability (regardless of whether considered in a proceeding at law or in equity).

I am a member of the bar of the State of Illinois. The opinions expressed above are limited to the laws of the State of Illinois and the General Corporation Law of the State of Delaware, and I express no opinion concerning the laws of any other jurisdiction.

This opinion is given as of the date hereof, and I do not undertake to advise you of any facts that come to my attention, or of any change in law that may occur, after the date hereof.

I hereby consent to the filing of this opinion as an exhibit to the Current Report on Form 8-K dated the date hereof filed by the Company and incorporated by reference into the Registration Statement referred to above and further consent to the reference to my name under the caption "Legal Matters" in the prospectus, which is a part of the Registration Statement. In giving this consent, I do not admit that I am in the category of persons whose consent is required under Section 7 of the Securities Act.

Very truly yours,

/s/ Janet O. Love